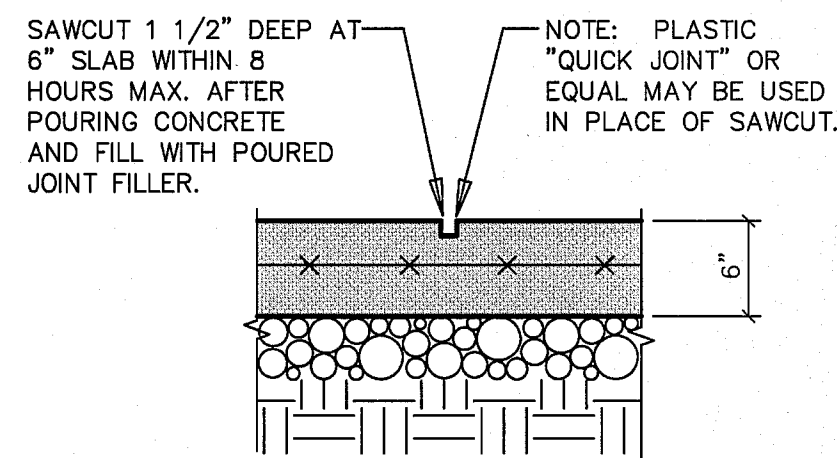
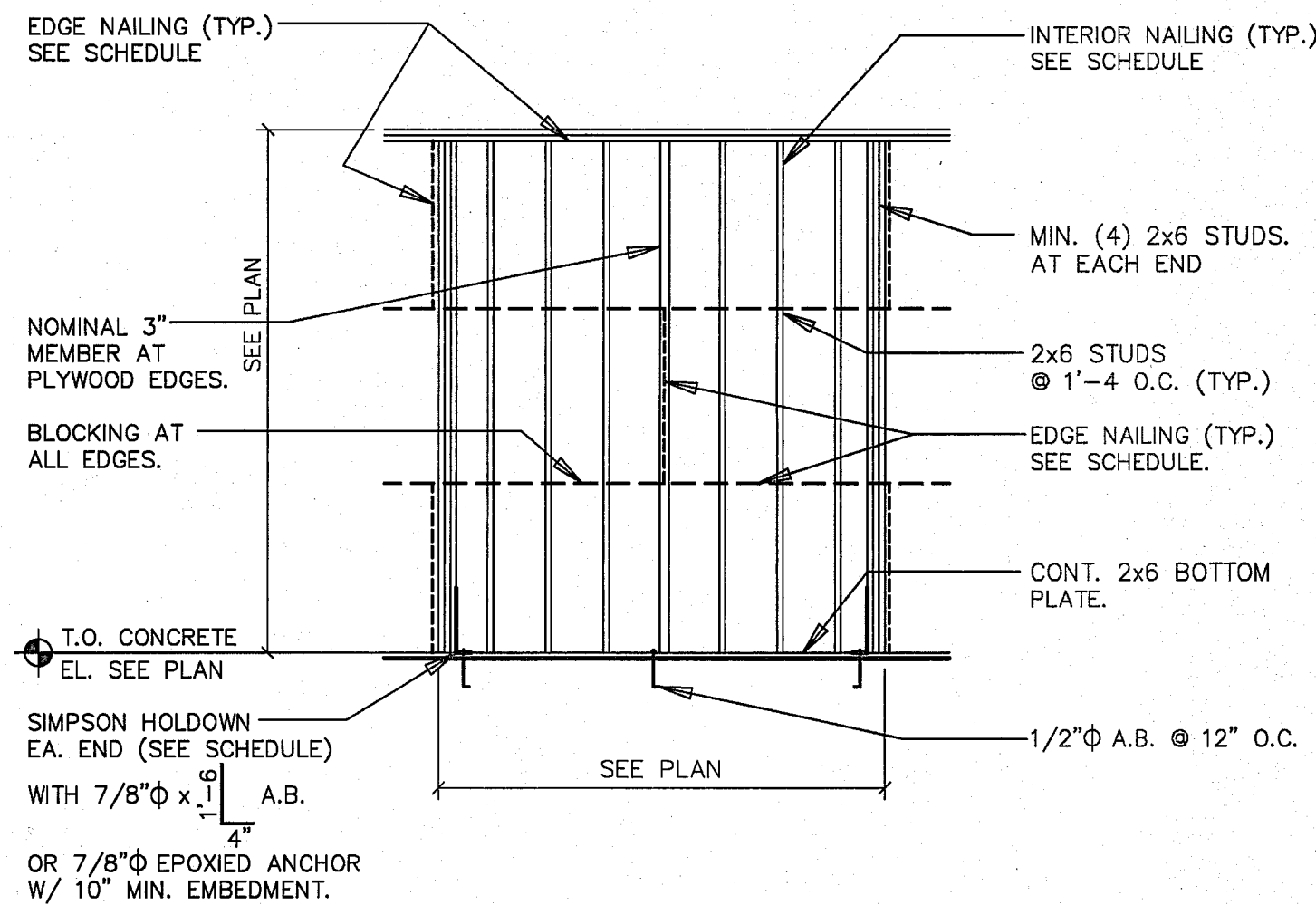


TYPICAL CORNER DETAILS 1"=1'-0"




TYPICAL CONTROL JOINT SECTION 1"=1'-0"



TYPICAL SHEAR WALL ELEVATION 1/4"=1'-0"

1. NO OPENINGS ALLOWED IN SHEAR PANELS UNLESS APPROVED BY THE STRUCTURAL ENGINEER.

PLYWOOD/SHEAR WALL NAILING SCHEDULE					
USE	PLYWOOD THICKNESS	SPAN/INDEX RATIO	EDGE NAILING	INTERIOR NAILING	HOLDOWNS
SLOPED ROOF	19/32"	32/16	10d @ 4" O.C. (BOUNDARIES) 10d @ 6" O.C. (ALL OTHER EDGES)	10d @ 12" O.C.	-
WALL (TYP)	15/32"	24/0	10d @ 6" O.C.	10d @ 12" O.C.	-
SHEAR WALL 	15/32"	24/0	10d @ 4" O.C.	10d @ 12" O.C.	HD9B
	15/32"	24/0	10d @ 2" O.C.	10d @ 6" O.C.	HD10B

- ALL EDGES OF SHEAR WALL SHEATHING SHALL BE BLOCKED WITH 3" NOMINAL OR WIDER FRAMING.
- OSB SHEATHING MAY BE USED AS AN ALTERNATE TO PLYWOOD W/ PRIOR APPROVAL OF OWNER AND ARCHITECT. OSB SHEATHING SHALL COMPLY WITH THE APA PLYWOOD DESIGN SPECIFICATION AND SHALL HAVE A SPAN RATING EQUIVALENT TO OR BETTER THAN THE PLYWOOD IT REPLACES. ATTACHMENT AND THICKNESS (WITHIN 1/32") SHALL BE THE SAME AS THE PLYWOOD IT REPLACES.
- AT ABUTTING PANEL EDGES, STUDS SHALL BE NO LESS THAN A SINGLE 3" NOMINAL MEMBER AND NAILS SHALL BE STAGGERED.
- PROVIDE (3) 2" NOMINAL STUDS AND HOLDOWNS AT EACH END OF SHEAR WALL, AS WELL AS EACH SIDE OF EACH OPENING WITHIN THE DESIGNATED EXTENT OF THE WALL (SEE PLAN).
- HOLDOWNS LISTED ARE BY SIMPSON STRONG-TIE. ALTERNATES MUST BE EQUIVALENT AND MUST BE APPROVED BY THE STRUCTURAL ENGINEER.

ABBREVIATIONS

A.B.	- ANCHOR BOLT	F.O.B.	- FACE OF BRICK	P.T.	- PRESSURE TREATED
ADD'L	- ADDITIONAL	F.O.CONC.	- FACE OF CONCRETE	R.	- RADIUS
ADJ.	- ADJACENT	F.O.W.	- FACE OF WALL	REIN.	- REINFORCEMENT
A.I.S.C.	- AMERICAN INSTITUTE OF STEEL CONSTRUCTION	FS.	- FLAT SLAB	REQ'D.	- REQUIRED
ALT.	- ALTERNATE	FT.	- FOOT	RM.	- ROOM
ARCH.	- ARCHITECTURAL	FTG.	- FOOTING	SCHED.	- SCHEDULE
A.S.T.M.	- AMERICAN SOCIETY FOR TESTING & MATERIALS	F.W.	- FILLET WELD	SECT.	- SECTION
BLDG.	- BUILDING	GA.	- GAUGE	SH.	- SHEET
BM.	- BEAM	GAL.	- GALVANIZED	SIM.	- SIMILAR
B.O.	- BOTTOM OF	GL-LAM BEAM	- GLU-LAM BEAM	s.l.	- SNOW LOAD
BOT.	- BOTTOM	GR.	- GRADE	S.L.V.	- SHORT LEG VERTICAL
BSMT.	- BASEMENT	GR. BM.	- GRADE BEAM	SPC.	- SPACE
BTWN.	- BETWEEN	H.A.S.	- HEADED ANCHOR STUD	SPEC.	- SPECIFICATION
CANT.	- CANTILEVER	HORIZ.	- HORIZONTAL	SQ.	- SQUARE
CB.	- CARDBOARD	H.S.B.	- HIGH STRENGTH BOLT	STD.	- STANDARD
CH.	- CHAMFER	H.S.S.	- HOLLOW STRUCTURAL SECTION	STIFF.	- STIFFENER
C.J.	- CONTROL/CONSTRUCTION JOINT	I.D.	- INSIDE DIAMETER	STL.	- STEEL
CLR.	- CLEAR, CLEARANCE	I.F.	- INSIDE FACE	STOR.	- STORAGE
C.M.U.	- CONCRETE MASONRY UNIT	INT.	- INTERIOR	SYM.	- SYMMETRICAL
COL.	- COLUMN	JNT.	- JOINT	T.&B.	- TOP AND BOTTOM
CONC.	- CONCRETE	K.C.I.	- KIP PER CUBIC INCH	THK.	- THICKNESS
CONN.	- CONNECTION	LB.	- POUND	T.O.	- TOP OF
CONST.	- CONSTRUCTION	LIN. FT.	- LINEAL FEET	TYP.	- TYPICAL
CONT.	- CONTINUOUS	LL.	- LIVE LOAD	UN.O.	- UNLESS NOTED OTHERWISE
CONTR.	- CONTRACTOR	LL.V.	- LONG LEG VERTICAL	VAR.	- VARIES
CTRD.	- CENTERED	L.S.L.	- LAMINATED STRAND LUMBER	VERT.	- VERTICAL
DET.	- DETAIL	L.V.L.	- LAMINATED VENEER LUMBER	V.I.F.	- VERIFY IN FIELD
DIAG.	- DIAGONAL	MAT'L.	- MATERIAL	WT.	- WEIGHT
DIAM.	- DIAMETER	MAX.	- MAXIMUM		
DIM.	- DIMENSION	MECH.	- MECHANICAL		
DISCONT.	- DISCONTINUOUS	MID.	- MIDDLE		
d.I.	- DEAD LOAD	MIN.	- MINIMUM		
MTL.	- METAL	MISC.	- MISCELLANEOUS		
E.A.	- EACH	N.L.C.	- NOT IN CONTRACT		
E.F.	- EACH FACE	NO.	- NUMBER		
EL.	- ELEVATION	NOM	- NOMINAL		
ELECT.	- ELECTRICAL	N.T.S.	- NOT TO SCALE		
ELEV.	- ELEVATOR	O.C.	- ON CENTER		
EQ.	- EQUAL	O.F.	- OUTSIDE FACE		
E.W.B.	- END WALL BARS	O.D.	- OUTSIDE DIAMETER		
E.W.	- EACH WAY	O.H.	- OPPOSITE HAND		
EXIST.	- EXISTING	OPNG.	- OPENING		
EXP. JNT.	- EXPANSION JOINT	P.A.F.	- POWDER ACTUATED FASTENERS		
EXT.	- EXTERIOR	R	- PLATE		
FDN.	- FOUNDATION	P.S.F.	- POUND PER SQUARE FOOT		
FIN.	- FINISH	P.S.I.	- POUND PER SQUARE INCH		
FLR.	- FLOOR	P.S.L.	- PARALLEL STRAND LUMBER		

SYMBOLS

⊕	CENTER LINE
⊙	DIAMETER
⊕	ELEVATION
⊕	AND
W/	WITH
PL	PLATE
X	BY
#	NUMBER
@	AT
⊕	SQUARE
L	ANGLE

GENERAL NOTES

- CODES USED FOR DESIGN: 2003 INTERNATIONAL BUILDING CODE, ASCE/SEI 7-10
 - LIVE LOADS USED IN DESIGN:
 - ROOF:
 - FLAT ROOF SNOW LOAD p_f -----30 PSF
 - GROUND SNOW LOAD p_g -----43 PSF
 - SNOW EXPOSURE FACTOR C_e -----1.0
 - SNOW LOAD IMPORTANCE FACTOR I_s -----1.0
 - THERMAL FACTOR C_t -----1.0
 - FLOOR-----100 PSF
 - WIND:
 - EXPOSURE-----C
 - RISK CATEGORY-----II
 - V_{ult} -----115 MPH
 - V_{dir} -----89 MPH
 - INTERNAL PRESSURE COEFFICIENT GC_{pi} -----+/-0.18
- COMPONENTS AND CLADDING - STRENGTH DESIGN (MULTIPLY x 0.6 FOR ASD VALUES)
BASED ON EFFECTIVE AREA = 20 SQ. FT.
TYPICAL WALL (INWARD PRESSURE)-----28 PSF
TYPICAL WALL (OUTWARD PRESSURE)-----28 PSF
WALL CORNERS (OUTWARD PRESSURE)-----50 PSF
TYPICAL ROOF (OUTWARD PRESSURE)-----41 PSF
ROOF EAVES, RAKES, RIDGES, & CORNERS (OUTWARD PRESSURE)-----87 PSF
PARAPETS (INWARD OR OUTWARD PRESSURE)-----115 PSF
- SEISMIC:

SEISMIC DESIGN HAS BEEN PERFORMED IN ACCORDANCE WITH N.E.H.R.P. PROVISIONS AND THE REQUIREMENTS OF ASCE/SEI 7-10.

RISK CATEGORY-----II

IMPORTANCE FACTOR I_s -----1.00

R COEFFICIENT R -----6.5

SPECTRAL RESPONSE COEFFICIENTS:
 S_a -----0.294
 S_1 -----0.078
 S_{ds} -----0.307
 S_{d1} -----0.124

SEISMIC RESPONSE COEFFICIENTS
 C_s -----0.047

SITE CLASS-----D

SEISMIC DESIGN CATEGORY-----B

BASIC SEISMIC:
FORCE RESISTING SYSTEM-----WOOD STRUCTURAL PANEL SHEAR WALLS

DESIGN BASE SHEAR
 V -----10K

ANALYSIS PROCEDURE-----EQUIVALENT LATERAL FORCE PROCEDURE

- CONCRETE:
 - CONCRETE MIX TABLE:

DESIGN MIX	INTENDED USE	28 DAY STRENGTH F _C (KSI)	CONC. TYPE	CONC. TYPE LIGHTWEIGHT (LW) NORMAL WT. (NW)	MAX W.C. (INCLUDING FLY ASH)	MAX AGGR. (IN) (1)	SUMP LIMITS (IN)	TOTAL AIR LIMITS (%) (2)	CEMENT TYPE	REQ'D ADMIXTURES (3)	OTHER REQUIREMENTS (4)
1	MONOLITHIC SLAB ON GRADE	4.5	NW	0.45	3/4	4	6	II	AE	5	

NOTES:

- FOR THE MAXIMUM COARSE AGGREGATE SIZE INDICATED, USE THE FOLLOWING AGGREGATE SIZE NUMBERS PER ASTM C33:
3/4" - #67 AGGREGATE
1" - #57 AGGREGATE
 - TOTAL AIR CONTENT LIMITS INCLUDE BOTH ENTRAINED AND ENTRAPPED AIR. AIR +/- 1 1/2% 'N' IN COLUMN INDICATES ADDITION OF ENTRAINED AIR IS NOT PERMITTED.
 - ABBREVIATIONS FOR REQUIRED ADMIXTURES AS FOLLOWS:
AE = AIR-ENTRAINING ADMIXTURE. DO NOT USE ENTRAINED AIR FOR STEEL TROWELED FINISHED FLOORS.
WRA = WATER REDUCING ADMIXTURE.
 - ABBREVIATIONS FOR OTHER REQUIREMENTS AS FOLLOWS:
FAR = 20% CLASS F FLY ASH REQUIRED.
 - FOR CONCRETE PLACED BY PUMPING, PROVIDE CONCRETE MIX FLOWABILITY TO FACILITY PUMPING.
 - ALL REINFORCING SHALL CONFORM TO ASTM A615, GRADE 60, EXCEPT COLUMN TIES AND DOWELS TO SLABS ON GRADE MAY BE GRADE 40.
 - NO SPLICES OF REINFORCEMENT SHALL BE MADE EXCEPT AS DETAILED OR AUTHORIZED BY THE STRUCTURAL ENGINEER. LAP SPLICES, WHERE PERMITTED, SHALL BE A MINIMUM OF 36 BAR DIAMETERS. MAKE ALL BARS CONTINUOUS AROUND CORNERS.
 - STAGGER SPLICES A MINIMUM OF 4'-0" FOR TOP AND BOTTOM CONTINUOUS BARS IN FOUNDATION, UNLESS OTHERWISE SHOWN OR NOTED.
 - DETAIL BARS IN ACCORDANCE WITH A.C.I. DETAILING MANUAL AND A.C.I. BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE, LATEST EDITIONS.
 - PROVIDE ALL ACCESSORIES NECESSARY TO SUPPORT REINFORCING AT POSITIONS SHOWN ON THE DRAWINGS. DO NOT ATTEMPT TO LOCATE REINFORCING DURING CONCRETE PLACEMENT.
 - REINFORCEMENT PROTECTION SHALL BE AS FOLLOWS:
 - CONCRETE POURED AGAINST EARTH-----3"
 - FORMED CONCRETE EXPOSED TO EARTH OR WEATHER-----2"
 - FORMED STAIRS OR WALLS NOT EXPOSED TO WEATHER-----3/4"
 - PLACE 2-#5 (ONE EACH FACE) WITH 2'-0" PROJECTION AROUND ALL OPENINGS IN CONCRETE UNLESS OTHERWISE SHOWN OR NOTED.
 - SLABS, BEAMS, AND GRADE BEAMS SHALL NOT HAVE JOINTS IN A HORIZONTAL PLANE. ANY STOP IN CONCRETE WORK MUST BE MADE AT MIDDLE OF SPAN WITH KEYS AS INDICATED IN THE TYPICAL CONCRETE WALL CONSTRUCTION JOINT DETAIL. ALL CONSTRUCTION JOINTS SHALL BE AS DETAILED OR AS APPROVED BY THE STRUCTURAL ENGINEER.
- STEEL:
 - ALL STRUCTURAL STEEL S SHAPES SHALL CONFORM TO ASTM A36 (F_y = 36 ksi).
 - STRUCTURAL STEEL SHALL BE DETAILED AND FABRICATED IN ACCORDANCE WITH LATEST PROVISIONS OF THE A.I.S.C. MANUAL OF STEEL CONSTRUCTION.
 - USE FRAMED BEAM CONNECTIONS WITH 3/4" DIAMETER ASTM A325 BOLTS, OR WELDED EQUIVALENT, UNLESS OTHERWISE SHOWN OR NOTED. FOR BEAMS WITHOUT DESIGNATED LOADS ON DRAWING, SELECT CONNECTIONS TO SUPPORT 50% OF TOTAL UNIFORM LOAD CAPACITY IN BENDING FOR EACH GIVEN BEAM AND SPAN, PLUS THE REACTION DUE TO ANY CONCENTRATED LOADS, MINIMUM OF (2) BOLTS PER CONNECTION.
 - ALL WELDERS SHALL HAVE EVIDENCE OF PASSING THE A.W.S. STANDARD QUALIFICATION TESTS.

- WOOD:
 - ALL BEAMS AND HEADERS 2 TO 4 INCHES THICK SHALL BE HEM-FIR NO. 2 AND BETTER WITH F_b = 850 PSI AND E = 1,300,000 PSI.
 - STUDS AND PLATES SHALL BE HEM-FIR IN STUD GRADE WITH F_b = 675 PSI AND E = 1,200,000 PSI.
- FOUNDATIONS:

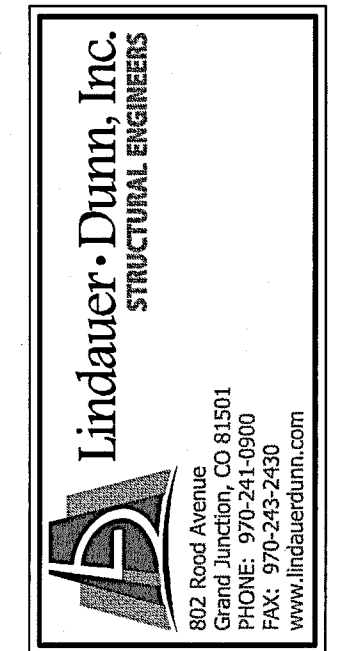
FOUNDATION DESIGN IS BASED ON RECOMMENDATIONS BY HUDDLESTON BERRY ENGINEERING AND TESTING, L.L.C. JOB NO. 00302-0042. RECOMMENDATIONS IN THIS REPORT SHOULD BE FOLLOWED.

ALLOWABLE SOIL BEARING PRESSURE-----2,000 PSF

THE SOILS ENGINEER SHALL EXAMINE EXCAVATION TO VERIFY BEARING PRESSURE AND SOILS CONDITIONS PRIOR TO CONSTRUCTION.
- ALL DIMENSIONS ON STRUCTURAL DRAWINGS TO BE CHECKED AGAINST ARCHITECTURAL. NOTIFY ARCHITECT AND STRUCTURAL ENGINEER OF ANY DISCREPANCIES BEFORE PROCEEDING WITH CONSTRUCTION.
- VERIFY ALL OPENINGS THROUGH FLOORS, ROOF, AND WALLS WITH MECHANICAL AND ELECTRICAL REQUIREMENTS.



Michael E. Oney
architect
115 N Fifth Street, Suite 409
Grand Junction, Colorado 81501
(970) 254-9089
mcoarch@frontier.net



Delta Pump Station
Address
Delta, Colorado

General Notes & Sections

Project No.: 16.033
Date: 04/20/16
Drawn By: kdn
Revisions:

Sheet

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